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### **REMARKS**

The Official Action dated February 22, 2006, has rejected claims 1 to 5, 9 to 12, 15, and 17 to 18 under 35 U.S.C. § 102 as anticipated by U.S. Patent No. 6,921,791, issued to Lenox et al. (hereinafter "Lenox") in view of U.S. Patent No. 5,234,761 issued to Barnes et al. (hereinafter "Barnes"). Second, claims 1 to 18 are rejected under 35 U.S.C. § 103 as obvious over U.S. Patent No. 6,506,835, issued to Hofman (hereinafter "Hofman"). Finally, claims 6 to 8, 13, 14 and 16 have also been rejected as obvious over Lenox in view of Hofman.

These are the sole substantive reasons set forth in the Official Action why claims 1 to 18 should not be allowed. Applicant respectfully traverses these rejections for the reasons set forth below.

As a preliminary matter, the facts and reasoning set forth in the Response filed on January 9, 2006, are neither withdrawn nor abandoned.

Applicant further respectfully submits that claim 1 specifically recites, "the thermoplastic polymer is a continuous phase of the TPE having dispersed therein the elastomeric PVBX." Independent claims 12 and 15 also include the feature that the PVBX is dispersed in the thermoplastic polymer.

Nowhere in Lenox, however, is it taught or even suggested that the thermoplastic elastomer is a dispersion. To the contrary, in fact, the polymer blend described in Lenox must not be a dispersion. See, for example, Lenox in column 3 at lines to 55: "This [method] needs to be carried out [at] temperatures above 250°F. using conditions of shear sufficient to cause molecular blending and reaction of the polymeric components." [*Emphases supplied.*] Those of skill in the art are well aware that dispersions are not uniformly blended at a molecular level. Plainly, then, Lenox does not describe Applicant's claimed invention.

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Therefore, Applicant respectfully submits that independent claims 1, 12, and 15 are not anticipated by Lenox. Accordingly, it is respectfully requested that the rejection under 35 U.S.C. § 102 be withdrawn upon reconsideration.

In addition, claims 2 to 5, 9 to 11, 17 and 18 depend, directly or indirectly, from independent claims 1, 12, and 15. It follows by statute that the dependent claims are also not anticipated by Lenox for at least the reasons set forth above with respect to claims 1, 12 and 15. Consequently, Applicant also respectfully requests that the rejections of claims 2 to 5, 9 to 11, 17 and 18 under 35 U.S.C. § 102 be withdrawn upon reconsideration.

Second, the claims are not obvious over Hoffman. Independent claims 1, 12, and 15 all clearly recite that a crosslinked polyvinyl butyral (PVBX) is dispersed in a thermoplastic polymer. Hoffman, however, does not describe any crosslinked polyvinyl butyrals. Therefore, Hofmann does not teach or suggest every element of the claimed invention.

The Official Action suggests that the ethylene/vinyl acetate copolymer and ethylene/alkyl(meth)acrylic acid copolymer described in Hoffman may act as crosslinking agents. Crosslinking, though, is a specific type of chemical reaction. Merely having an "acid functionality... [that] enhances the physical properties of the resulting polymer" (Official Action at page 4) is insufficient to meet any technical definition of crosslinking. In this connection, Applicant notes that copolymers of ethylene with vinyl acetate, and copolymers of ethylene with alkyl esters of (meth)acrylic acid, do not comprise any acid functionality. Accordingly, should this line of reasoning be maintained, Applicant respectfully requests clarification of the mechanism by which these copolymers may crosslink polyvinyl butyral. See 37 C.F.R. §§ 1.104.

With respect to the compatibilizers described in Hoffman as having acid functionality, such as the copolymers of ethylene with ethylenically unsaturated carboxylic acids (column 3 at lines 19 to 20), and the ethylene copolymers that are

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grafted with maleic anhydride (column 3 at lines 45 to 57), Hofman provides no reasonable expectation that these materials may be used successfully to crosslink polyvinyl butyral.

More significantly, even assuming *arguendo* that these materials may crosslink polyvinyl butyral, Hofman provides no reasonable expectation whatsoever that the result will be a dispersion of PVBX in a thermoplastic polymer. Applicant notes that the claimed thermoplastic polymer may be polyethylene or polypropylene, for example. Introducing a significant fraction of copolymerized ethylene into the PVB polymer via a crosslinking reaction may very well compatibilize the PVB with the thermoplastic polymer to the extent that the dispersion, which is a specifically recited feature of the independent claims, would be destroyed.

The Official Action further suggests that Hofman describes the processes of claims 12 and 15. These claims, however, also specifically recite that the starting material for the crosslinking reaction is a modified non-blocking PVB composition. No such composition is taught or suggested in Hofman.

Consequently, Applicant respectfully submits that independent claims 1, 12, and 15 are not obvious over Hofman. Accordingly, it is respectfully requested that this rejection under 35 U.S.C. § 103 be withdrawn upon reconsideration.

In addition, claims 2 to 11, 13, 14 and 16 to 18 depend, directly or indirectly, from independent claims 1, 12, and 15. It follows by statute that the dependent claims are also not anticipated by Hofman for at least the reasons set forth above with respect to claims 1, 12 and 15. Consequently, Applicant also respectfully requests that the rejections of claims 2 to 11, 13, 14 and 16 to 18 under 35 U.S.C. § 103 be withdrawn upon reconsideration.

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Finally, the claims are not obvious over Lenox in view of Hofman. The Official Action alleges that any thermoplastic polymer described in Lenox may be freely substituted for the polyvinyl chloride in Hofman's composition. Lenox's composition must be substantially halogen-free, however, and Hofman's composition is required to include polyvinyl chloride. See Abstracts of Lenox and Hofman. It is therefore improper to combine these two references, because each clearly teaches away from the other. See the M.P.E.P. at § 2145(X)(D)(2). Accordingly, Applicant respectfully requests that the rejection of claims 6 to 8 as obvious over Lenox and Hofman be withdrawn upon reconsideration.

With respect to process claims 12 and 15, Applicant offers the following additional notes. As observed above, neither Lenox nor Hofman, alone or in combination, teaches or suggests the specifically recited modified non-blocking PVB composition. Claims 13, 14 and 16 depend, directly or indirectly, from independent claims 12 and 15. It follows by statute that the dependent claims are also not obvious over Lenox and Hofman for at least the same reasons that claims 12 and 15 are not obvious. Consequently, Applicant also respectfully requests that this rejection of claims 13, 14 and 16 under 35 U.S.C. § 103 be withdrawn upon reconsideration.

### **Conclusion**

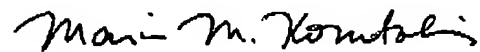
A Petition for an Extension of Time for one month and the required fee for the extension are filed concurrently herewith. Should any further fee be required in connection with the present response, the Examiner is authorized to charge such fee, or render any credit, to Deposit Account No. 04-1928 (E.I. du Pont de Nemours and Company).

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In view of the above remarks, it is felt that all claims are in condition for allowance, and such action is respectfully requested. In closing, the Examiner is invited to contact the undersigned attorney by telephone at (302) 892-1004 to conduct any business that may advance the prosecution of the present application.

Respectfully submitted,



**MARIA M. KOURTAKIS**  
ATTORNEY FOR APPLICANT  
Kelly Law Registry for DuPont Legal  
Registration No.: 41,126  
Telephone: 302-892-1004  
Facsimile: 302-992-3257

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